WHAT IS CLAIMED IS:

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1.   An image processing device, comprising:

an image dividing unit configured to divide an input image into a plurality of image sections;

10   an encoding unit configured to independently encode each of the image sections, and generate a first code stream including a plurality of code sections corresponding to the image sections; and

an editing unit configured to edit one of

15   the code sections in the first code stream, and generate a second code stream based on the edited code section.

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2.   The image processing device as claimed in claim 1, wherein

said editing unit comprises a deletion unit

25   configured to delete at least one of the code sections

from the first code stream and output the second code
stream including the remaining code sections in the
first code stream.

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3. The image processing device as claimed
in claim 1, wherein

10   said editing unit comprises an extraction
unit configured to extract at least one of the code
sections from the first code stream and output the
second code stream including the extracted at least one
code section.

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4. The image processing device as claimed
20 in claim 1, wherein

        said editing unit comprises:

        a selection unit configured to select at
least one of the code sections from the first code
stream; and

25   a replacement unit configured to replace the

selected code section with predetermined coded data,
and output the second code stream including the
unselected code sections in the first code stream and
the predetermined code data.

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5. The image processing device as claimed

10 in claim 2, wherein said deletion unit allocates
information data indicating that the deleted code
section is out of the input image to a header of the
deleted code section, and outputs the second code
stream including the remaining code sections in the

15 first code stream and the deleted code section.

20 6. The image processing device as claimed
in claim 3, wherein
said extraction unit assigns allocates
information data indicating that each of the
unextracted code sections is out of the input image to

25 a header of each of the unextracted code sections, and

outputs the second code stream including the extracted code section and the unextracted code sections.

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7. The image processing device as claimed in claim 4, wherein the predetermined coded data includes a plurality of pixels each having a
10 predetermined pixel value.

15 8. The image processing device as claimed in claim 4, wherein

said editing unit further comprises:

a decoding unit configured to decode the selected code section and generate first image data
20 corresponding to the selected code section;

an image data generation unit configured to generate second image data based on the first image data; and

a compression unit configured to encode the
25 second image data and generate coded data, and output

the coded data to the replacement unit as the
predetermined coded data.

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9.   The image processing device as claimed
in claim 8, wherein

said editing unit further comprises a
10 detection unit configured to determine a texture pixel
value of the first image data output from the decoding
unit; and

the image data generation unit assigns the
determined texture pixel value to pixels of the first
15 image data and outputs the pixel-value assigned first
image data as the second image data.

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10.   The image processing device as claimed
in claim 4, wherein the replacement unit replaces image
data of the selected code section with image data of
the predetermined coded data and maintains a header of
25 the selected code section unchanged.

5   11.   The image processing device as claimed
in claim 4, wherein the replacement unit replaces a
header and image data of the selected code section with
a header and image data of the predetermined coded data,
respectively.

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12.   The image processing device as claimed
15   in claim 4, wherein when replacing the selected code
section with the predetermined coded data, the
replacement unit replaces a data length of the selected
code section or a data length of image data of the
selected code section with a data length of the
20   predetermined coded data or a data length of image data
of the predetermined coded data.

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13. The image processing device as claimed in claim 1, wherein the encoding unit encodes each of the image sections by using one of entropy coding with two-dimensional discrete wavelet transformation and

5   arithmetic coding.

10   14. The image processing device as claimed in claim 1, wherein the encoding unit encodes each of the image sections by using JPEG 2000 algorithm; and

each of the image sections corresponds to a tile according to the JPEG 2000 algorithm.

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15. The image processing device as claimed

20 in claim 14, wherein a height and a width of the tile are multiples of a quantity $d = 2^L$, where L is the wavelet decomposition level.

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16. An image forming apparatus, comprising:

an image reading unit configured to read an image on a manuscript;

5   an image processing device, comprising: an image dividing unit configured to divide an input image into a plurality of image sections; an encoding unit configured to independently encode each of the image sections, and generate a first code stream including a

10   plurality of code sections corresponding to the image sections; and an editing unit configured to edit one of the code sections in the first code stream, and generate a second code stream based on the edited code section; and

15   a printer engine configured to form an image on a sheet of paper based on the second code stream.

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17. A program executable by a computer for processing an input image, comprising the steps of:

dividing the input image into a plurality of image sections;

25   independently encoding each of the image

sections, and generating a first code stream including a plurality of code sections corresponding to the image sections; and

5   editing one of the code sections in the first code stream and generating a second code stream based on the edited code section.

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18. A storage medium that stores a program executable by a computer for processing an input image, the program comprising the steps of:

dividing the input image into a plurality of 15 image sections;

independently encoding each of the image sections, and generating a first code stream including a plurality of code sections corresponding to the image sections; and

20   editing one of the code sections in the first code stream and generating a second code stream based on the edited code section.